PRODUCTS

Tantalum Capabilities

F-Tech & Simulated Breakdown Screening (SBDS)

Electronic Components
KEMET
CHARGED.

Why Choose KEMET

KEMET Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry across all dielectrics, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

Features & Benefits

- F-Tech
  - Based on fundamental understanding of degradation mechanisms in Tantalum and Niobium capacitors
  - Eliminated hidden defects in the dielectric which continue to grow in the field causing capacitor failures
- SBDS
  - Patent number US 7,671,603 B2
  - Non-destructive testing technique which allows determination of breakdown voltage (BDV) of a capacitor without damage to its dielectric
- Combination of F-Tech and SBDS
  - Provides highest reliability
  - Provides highest average BDV
  - Screens parts with BDV below standard deviation average

Product Checklist

- Is voltage derating mandatory?
- Is stable and low DC leakage current required?
- What is the circuit operating voltage?
- Are voltage spikes expected?
- Are there any special environmental conditions such as temperature, moisture, or vibration?
- What are the soldering conditions?
- What is the expected annual volume?

For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.

Programs Supported

Medical, aerospace, defense and other high reliability applications:

- Power supplies
- DC-to-DC converters
- Input filtering
- Output filtering
- Microprocessor decoupling
- Guidance systems
- Radar systems
- Targeting systems
- Communications systems

KEMET Products

KEMET Series	T493	T497	T550
Description	High Reliability Military/ Aerospace COTS/Low ESR Option 	High Grade COTS 	Polymer Hermetic Seal (PHS) 
Military Case Size	CWR11	CWR09/19/29	MIL-PRF-39006/25
EIA Case Size	7343-31, 7343-43	N/A	3528-21
KEMET Case Size	D, X	H (KEMET case 7.24 x 3.81 x 2.79 mm)	B
Capacitance Values	1.5 μF – 68 μF	4.7 μF – 22 μF	20 μF – 820 μF
Voltage Rating	20 V – 50 V	20 V – 50 V	6 V – 75 V
Operating Temperature Range	-55°C – 125°C	-55°C – 125°C	-55°C – 105°C
Tolerance	±10%, ±20%	±10%, ±20%	±10%, ±20%
Characteristics	• Surface mountable • Reduced derating capability • Pb-free/RoHS-compliant available • 100% accelerated steady state aging • Self-healing mechanism • Surge current testing available • Various termination options • 100% thermal shock • Low profile case sizes • Customer-defined performance options	• Surface mountable • Reduced derating capability • Termination finishes offered per MIL-PRF-55365: – Gold plated – Solder fused – Solder plated – 100% tin – Hot solder dipped • Weibull grading available – B (0.1%/1000 hours) – C (0.01%/1000 hours) • Surge current testing available per MIL-PRF-55365: – 10 cycles @ +25°C – 10 cycles @ -55°C and +85°C • Standard and low ESR option	• Axial through-hole • Polymer cathode technology • ≤ 0.0075 CV (μA) at rated voltage after 5 minutes • Extremely low ESR • High frequency capacitance retention • Low temperature capacitance retention • 100% accelerated steady state aging • 100% surge current tested • Volumetric efficiency • Use of up to 80% of rated voltage • Non-ignition failure mode • Approximately 25% lighter than equivalent wet tantalum

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Ordering Information

Series	Case Size	Capacitance (pF) Code	Tolerance	Voltage	Failure Rate	Lead Material	Options	Description
T497	**H**	**156**	**M**	**006**	**A**	**T**	**6XXX**	
High Grade COTS	H	First two digits represent significant figures. Third digit specifies number of zeros.	K = ±10% M = ±20%	020 = 20 V 025 = 25 V 035 = 35 V 050 = 50 V	A = N/A B = 0.1%/1000 hrs C = 0.01%/1000 hrs	T = 100% Tin B = Gold H = SnPb (5% min Pb)	6111 6112 6113 6211 6212 6213 6411 6412 6413	Surge = None, F-Tech & SBDS Surge = None, SBDS Surge = None, F-Tech Surge = 10 cycles, +25°C, F-Tech & SBDS Surge = 10 cycles, +25°C, SBDS Surge = 10 cycles, +25°C, F-Tech Surge = 10 cycles, -55°C & +85°C, F-Tech & SBDS Surge = 10 cycles, -55°C & +85°C, SBDS Surge = 10 cycles, -55°C & +85°C, F-Tech
T497	**H**	**156**	**M**	**006**	**A**	**T**	**6XXX**	
Military COTS	D	First two digits represent significant figures. Third digit specifies number of zeros.	J = ±5% K = ±10% M = ±20%	020 = 20 V 025 = 25 V 035 = 35 V 050 = 50 V	A = N/A B = 0.1%/1000 hrs C = 0.01%/1000 hrs	T = 100% Tin B = Gold H = SnPb (5% min Pb) C = Hot solder dipped K = Solder fused	6111 6112 6113 6221 6222 6223 6431 6432 6433	Surge = None, F-Tech & SBDS, Standard ESR Surge = None, SBDS, Standard ESR Surge = None, F-Tech, Standard ESR Surge = 10 cycles, +25°C, F-Tech & SBDS, Low ESR Surge = 10 cycles, +25°C, SBDS, Low ESR Surge = 10 cycles, +25°C, F-Tech, Low ESR Surge = 10 cycles, -55°C & +85°C, F-Tech & SBDS, Ultra Low ESR Surge = 10 cycles, -55°C & +85°C, SBDS, Ultra Low ESR Surge = 10 cycles, -55°C & +85°C, F-Tech, Ultra Low ESR
T550	**B**	**107**	**M**	**025**	**A**	**T**	**4251**	
Polymer Hermetic Seal	B	First two digits represent significant figures. Third digit specifies number of zeros.	K = ±10% M = ±20%	025 = 25 V 035 = 35 V 050 = 50 V 060 = 60 V 075 = 75 V	A = N/A	T = 100% Tin H = SnPb (5% min Pb)	4250 4251	Surge = 10 cycles, +25°C Surge = 10 cycles, -55°

Note: Other KEMET series may be ordered with F-Tech and SBDS. Please contact KEMET for details.